U.S. Nuclear Regulatory Commission
Licensing and Oversight of Spent Nuclear Fuel Storage

Board of County Commissioners Meeting

St. Lucie County, Florida

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U.S. Nuclear Regulatory Commission

NRC's Mission

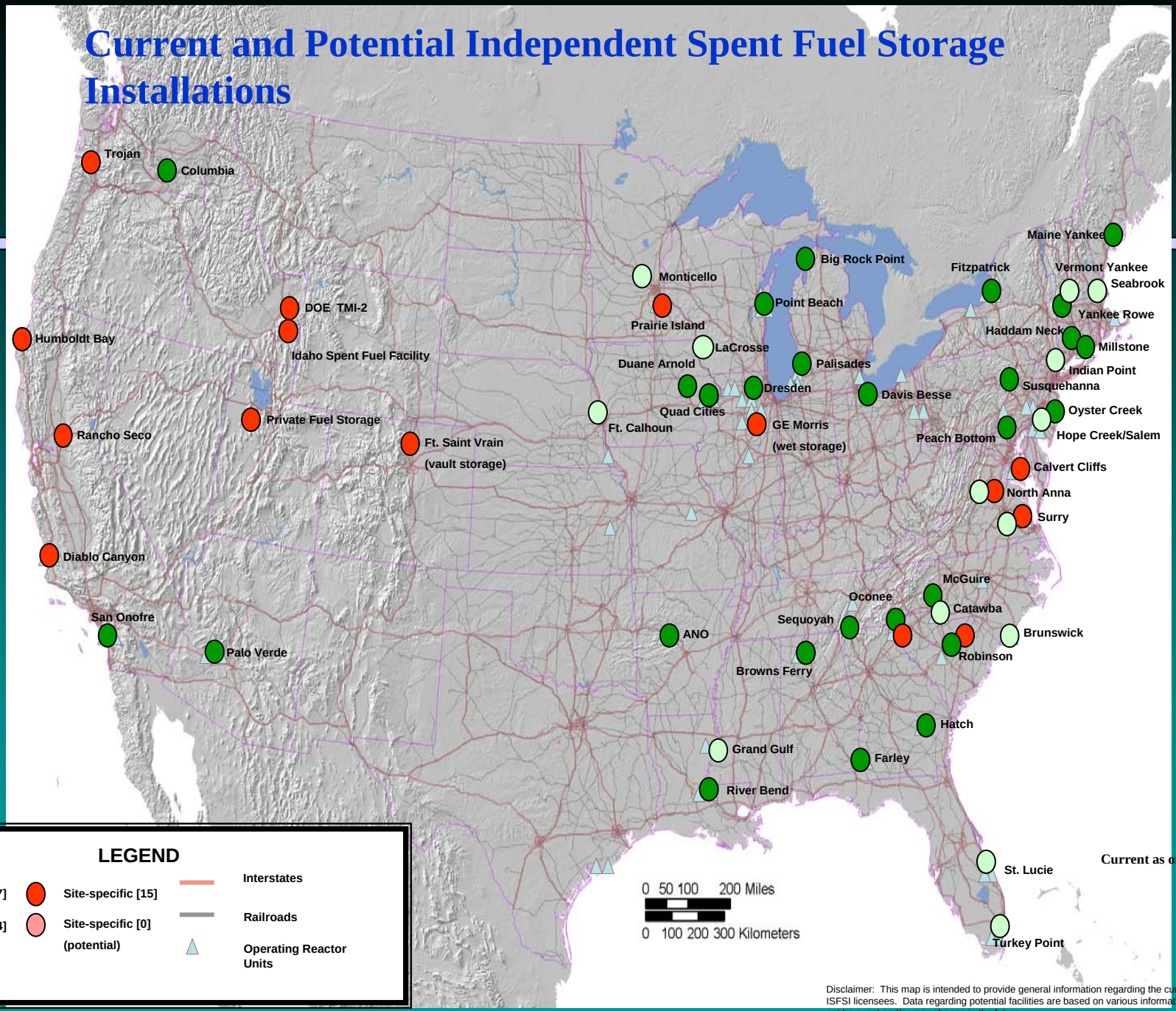
to regulate civilian use of nuclear materials to:

- Ensure adequate protection of public health and safety
- Promote the common defense and security
- Protect the environment

Status of Independent Spent Fuel Storage Installations (ISFSIs)

- 42 Licensed and/or Operating ISFSIs in 26 States
  14 announced plans for new ISFSIs
- About 800 loaded dry casks to date
- 13 sites use NUHOMS horizontal storage design
- Dry cask storage systems first used in 1986
- No safety problems
- NRC studies indicate very low risk

Current and Potential Independent Spent Fuel Storage Installations



LEGEND

- General [27]
- General [14] (potential)
- Site-specific [15]
- Site-specific [0] (potential)
- Interstates
- Railroads
- Operating Reactor Units

Current as of March 2006

Disclaimer: This map is intended to provide general information regarding the current and potential ISFSI licensees. Data regarding potential facilities are based on various information sources and may not be exact and/or may change in the future.

General License Process

- Certificate of Compliance – NRC performs safety review
- Power Plant Licensee (FPL) Selects, Evaluates, and Constructs the Dry Cask Storage System
- NRC inspects construction and operation

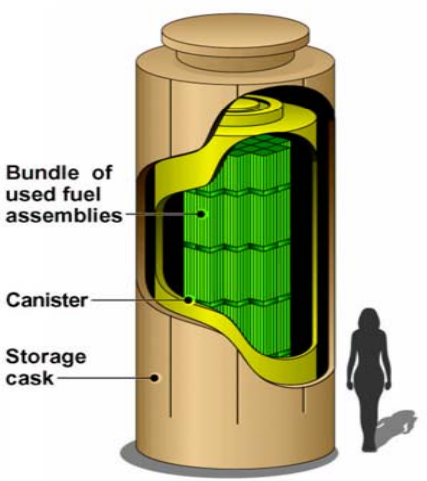
Publicly Available Information

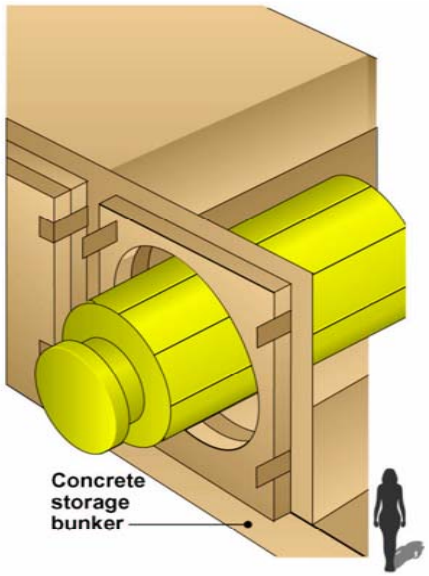
- NRC Website – www.nrc.gov
- Information on Spent Fuel Storage http://www.nrc.gov/waste/spent-fuel-storage.html
- Transnuclear NUHOMS-HD Storage System – http://ruleforum.llnl.gov/cgi-bin/rulemake?source=nuhomshd&st=directfr

Spent Fuel Dry Storage Single & Dual Purpose Cask

At some nuclear reactors across the country, spent fuel is kept on site, above ground, in systems basically similar to the ones shown here.

1 Once the spent fuel has cooled, it is loaded into special canisters which are designed to hold Pressurized-Water Reactor and Boiling-Water Reactor assemblies. Water and air are removed. The canister is filled with inert gas, welded shut, and rigorously tested for leaks. It may then be placed in a "cask" for storage or transportation.





2 The canisters can also be stored in above-ground concrete bunkers, each of which is about the size of a one-car garage. Eventually they may be transported elsewhere for storage.

Susquehanna Dry Cask Storage

Susquehanna uses a horizontal storage module, a Transnuclear model NUHOMS 52-B. Note the transporter and alignment of the transport cask so that the canister containing the spent nuclear fuel can be pushed into the storage module by a hydraulic ram.